



## CONSOLIDATED TEST REPORT

**Applicant:** Guangzhou FriendlyElec Technology Co., Limited  
**Address:** Room 4313, Block B, China Shine Plaza, No. 9 Lin He Xi Road, Tianhe District, Guangzhou, Guangdong, PR China  
**EUT Name:** NanoPi NEO Air  
**Model No.** NanoPi NEO Air  
**Brand Name:** N/A  
**Issue Date:** 2016-12-29

|                                  |   |        |
|----------------------------------|---|--------|
|                                  | With reference to IEC 62321 Ed 1.0: 2013                | MDL    |
|                                  | Determination of Lead (Pb) by ICP- OES                  | 2mg/kg |
| <b>Test Method (If tested) :</b> | Determination of Cadmium (Cd) by ICP- OES               | 2mg/kg |
|                                  | Determination of Mercury (Hg) by ICP-OES                | 2mg/kg |
|                                  | Determination of Chromium (Cr <sup>6+</sup> ) by UV-VIS | 2mg/kg |
|                                  | Determination of PBBs / PBDEs by GC-MS                  | 5mg/kg |

**Directive:** 2011/65/EU

**Remark:** Based on the performed test on submitted sample(s), the results of Cadmium, Lead, Mercury, Hexavalent Chromium Cr(VI), PBBs and PBDEs comply with the limits as set by RoHS Directive 2011/65/EU Annex II; recasting 2002/95/EC and the tested submitted sample complied with the requirements of Directive 2006/66/EC.

Signed for Shenzhen ETR

Jack Wang  
Manager

# 1 General Information

## 1.1 Client Information

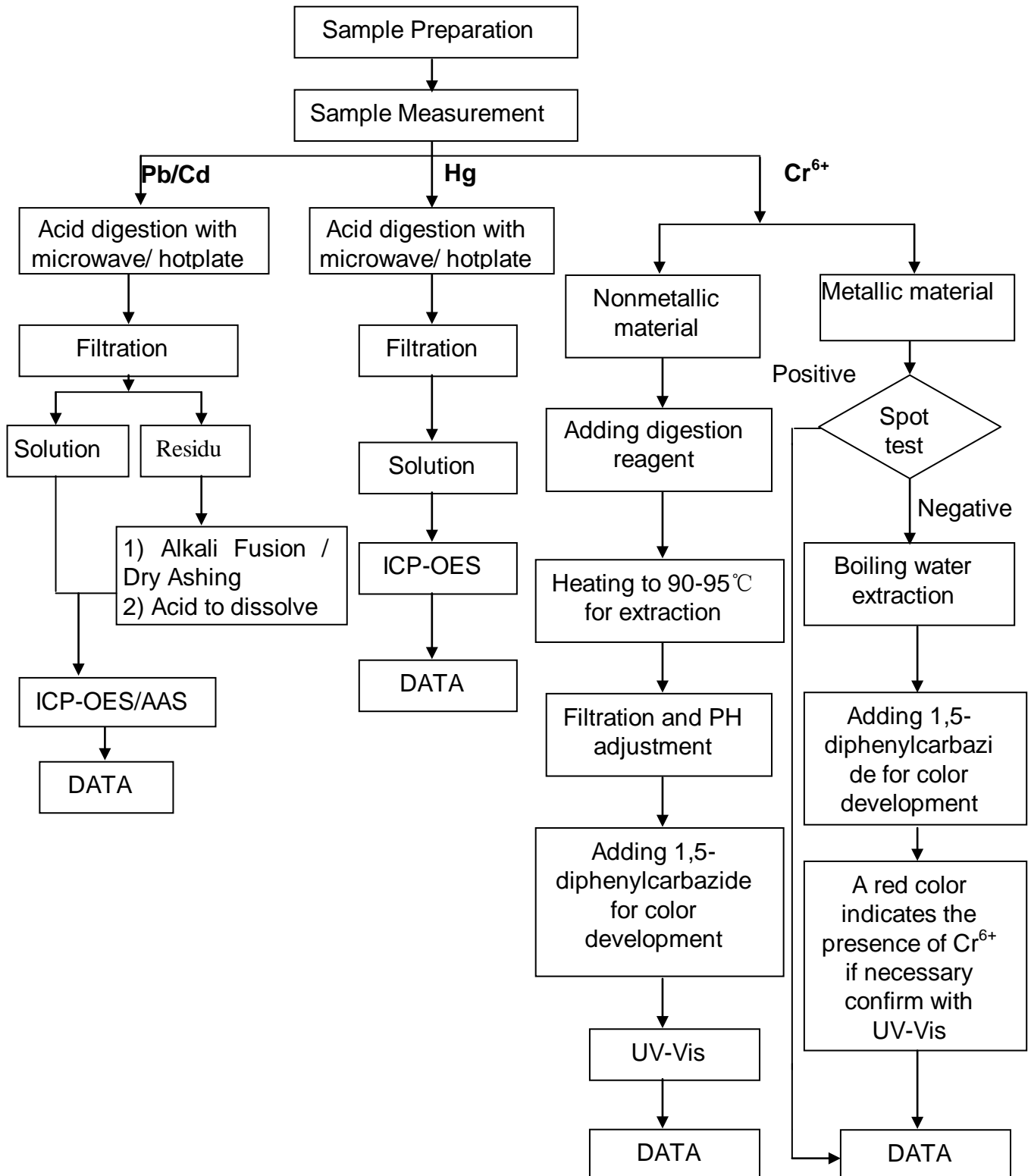
**Applicant** : Guangzhou FriendlyElec Technology Co., Limited  
**Address** : Room 4313, Block B, China Shine Plaza, No. 9 Lin He Xi Road,  
Tianhe District, Guangzhou, Guangdong, PR China  
**Manufacturer** : Guangzhou FriendlyElec Technology Co., Limited  
**Address** : Room 4313, Block B, China Shine Plaza, No. 9 Lin He Xi Road,  
Tianhe District, Guangzhou, Guangdong, PR China  
**EUT Name** : NanoPi NEO Air  
**Model No.** : NanoPi NEO Air

## 1.2 Test Facility

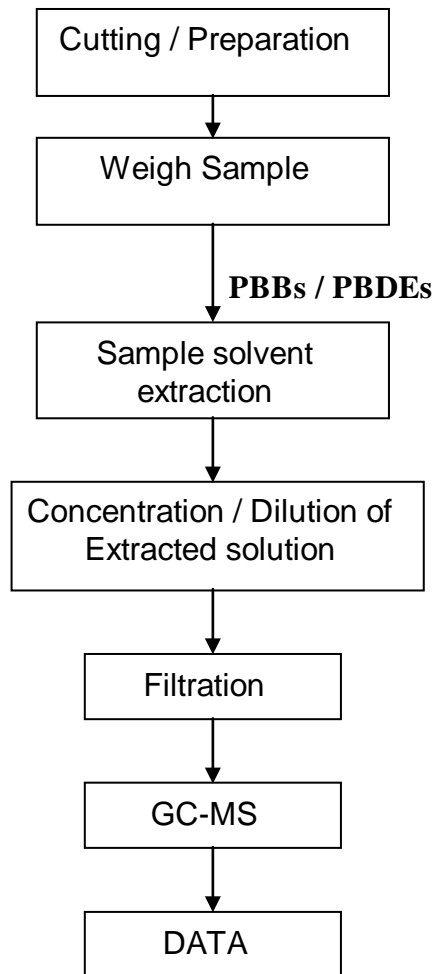
The testing report were performed by the Shenzhen ETR Standard Technology Co., Ltd., in their facilities located at 5/F, Bldg. A, The Third Industrial Zone Zhuao, No.1 Road Gushu, Xixiang Street, Bao'an District, Shenzhen, China.

## 2 Test Flow:

### 2.1 To Determine Lead/Cadmium/Mercury/ Hexavalent Chromium Content:



## 2.2 To Determine PBBs/PBDEs Content:



### 3 Test Result:

| No. | Part Of Sample              | Form of evidence of compliance |                   | Verdict |
|-----|-----------------------------|--------------------------------|-------------------|---------|
|     |                             | Test Laboratory                | Report No.        |         |
| 1   | Shell                       | SGS                            | SHAEC1605782313   | Pass    |
| 2   | Switch Button               | SGS                            | GZ1211302178/CHEM | Pass    |
| 3   | PCB                         | SGS                            | SHAEC1600081702   | Pass    |
| 4   | Plug-resistance             | SGS                            | SHACE1522698102   | Pass    |
| 5   | Chip Resistor               | SGS                            | CANEC1308548701   | Pass    |
| 6   | Chip Capacitors             | SGS                            | KA/2015/10621     | Pass    |
| 7   | Inductance                  | SGS                            | CANEC1301261603   | Pass    |
| 8   | Crystal                     | SGS                            | CE/2014/B0138     | Pass    |
| 9   | SMD crystal                 | SGS                            | CANEC1304692601   | Pass    |
| 10  | SMD diode                   | SGS                            | SHAEC1321669505   | Pass    |
| 11  | Wire                        | SGS                            | CANEC1400341301   | Pass    |
| 12  | Display Glass               | SGS                            | TSNEC1400701202   | Pass    |
| 13  | Protective Film             | SGS                            | CANEC1421657002   | Pass    |
| 14  | Ink                         | SGS                            | SHAEC1502300801   | Pass    |
| 15  | Screw                       | SGS                            | CANEC1401667501   | Pass    |
| 16  | USB interface steel section | SGS                            | CANEC1408645401   | Pass    |
| 17  | Solder                      | SGS                            | CANEC1407966506   | Pass    |
| 18  | Copper wire                 | SGS                            | JP/2014/041480    | Pass    |

## 3.1) Test Result: Heavy Metals (Pb, Cd, Cr6+, Hg) Tests

| Element | Pb          | Cd         | Cr <sup>6+</sup> | Hg          |
|---------|-------------|------------|------------------|-------------|
| Limit:  | 1000(mg/kg) | 100(mg/kg) | 1000(mg/kg)      | 1000(mg/kg) |
| 1       | N.D.        | N.D.       | N.D.             | N.D.        |
| 2       | N.D.        | N.D.       | N.D.             | N.D.        |
| 3       | N.D.        | N.D.       | N.D.             | N.D.        |
| 4       | N.D.        | N.D.       | N.D.             | N.D.        |
| 5       | N.D.        | N.D.       | N.D.             | N.D.        |
| 6       | N.D.        | N.D.       | N.D.             | N.D.        |
| 7       | N.D.        | N.D.       | N.D.             | N.D.        |
| 8       | N.D.        | N.D.       | N.D.             | N.D.        |
| 9       | N.D.        | N.D.       | N.D.             | N.D.        |
| 10      | N.D.        | N.D.       | N.D.             | N.D.        |
| 11      | N.D.        | N.D.       | N.D.             | N.D.        |
| 12      | N.D.        | N.D.       | N.D.             | N.D.        |
| 13      | N.D.        | N.D.       | N.D.             | N.D.        |
| 14      | N.D.        | N.D.       | N.D.             | N.D.        |
| 15      | N.D.        | N.D.       | N.D.             | N.D.        |
| 16      | N.D.        | N.D.       | N.D.             | N.D.        |
| 17      | N.D.        | N.D.       | N.D.             | N.D.        |
| 18      | N.D.        | N.D.       | N.D.             | N.D.        |

- ◆ “ N.D. ” means “ Not Detected ”, method detection limit = 2mg/kg.
- ◆ “ \* ” means be exempted from RoHS Directive.

## 3.2) Test Result: Brominated Flame Retardants (PBBs&amp;PBDEs) Tests

| PBBs                     | 1    | 2    | 3    | 4    | 5    | 6    | 7    |
|--------------------------|------|------|------|------|------|------|------|
| Monobromobiphenyl        | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Dibromobiphenyl          | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Tribromobiphenyl         | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Tetrabromobiphenyl       | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Pentabromobiphenyl       | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Hexabromobiphenyl        | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Heptabromobiphenyl       | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Octabromobiphenyl        | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Nonabromobiphenyl        | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Decabromobiphenyl        | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Sum of PBBs              | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| PBDEs                    | 1    | 2    | 3    | 4    | 5    | 6    | 7    |
| Monobromodiphenyl Ether  | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Dibromodiphenyl Ether    | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Tribromodiphenyl Ether   | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Tetrabromodiphenyl Ether | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Pentabromodiphenyl Ether | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Hexabromodiphenyl Ether  | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Heptabromodiphenyl Ether | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Octabromodiphenyl Ether  | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Nonabromodiphenyl Ether  | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Decabromodiphenyl Ether  | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Sum of PBDEs             | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |

| PBBs                     | 8    | 9    | 10   | 11   | 12   | 13   | 14   |
|--------------------------|------|------|------|------|------|------|------|
| Monobromobiphenyl        | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Dibromobiphenyl          | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Tribromobiphenyl         | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Tetrabromobiphenyl       | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Pentabromobiphenyl       | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Hexabromobiphenyl        | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Heptabromobiphenyl       | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Octabromobiphenyl        | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Nonabromobiphenyl        | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Decabromobiphenyl        | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Sum of PBBs              | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| PBDEs                    | 8    | 9    | 10   | 11   | 12   | 13   | 14   |
| Monobromodiphenyl Ether  | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Dibromodiphenyl Ether    | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Tribromodiphenyl Ether   | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Tetrabromodiphenyl Ether | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Pentabromodiphenyl Ether | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Hexabromodiphenyl Ether  | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Heptabromodiphenyl Ether | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Octabromodiphenyl Ether  | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Nonabromodiphenyl Ether  | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Decabromodiphenyl Ether  | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Sum of PBDEs             | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |

- ◆ PBBs Limit = 1000 ppm, PBDEs Limit = 1000 ppm.
- ◆ “ N.D. ” means “ Not Detected ”, method detection limit = 5mg/kg.



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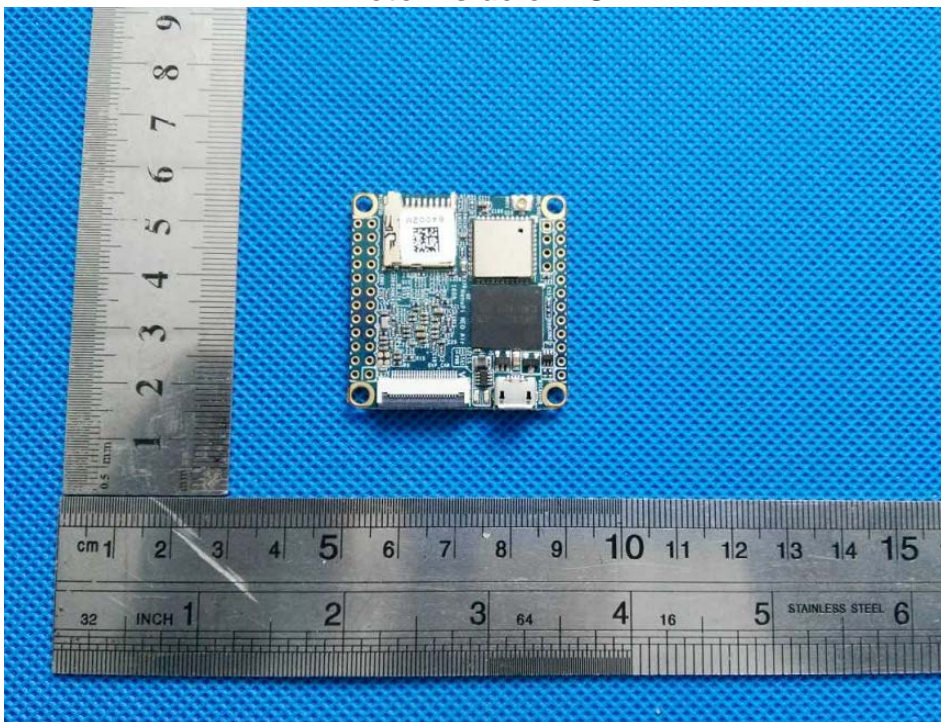
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## 4 Photographs - Constructional Details

Photo Appearance of EUT



Photo Inside of EUT



**END OF REPORT**